Ms. Vicki Tomb
Lake County Animal Control
3011 W. 93
Crown Point, IN 46307

Dear Ms. Tomb:

Re: Exempt Construction and Operation Status,
089-12431-00457

The application from Lake County Animal Control received on June 28, 2000, has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-1.1-3, it has been determined that the following small animal incinerator, to be located at 3011 W. 93, Crown Point, Indiana, is classified as exempt from air pollution permit requirements:

One (1) small animal incinerator, with a maximum capacity of 115 lbs/hr of waste, using 1,600,000 Btu/hr of natural gas as supplemental fuel, and exhausting to stack 1.

The following conditions shall be applicable:

(1) Pursuant to 326 IAC 4-2 (Incinerators), this rule establishes standards for the use of incinerators which emit regulated pollutants. All incinerators shall:

(a) consist of primary and secondary chambers or the equivalent;
(b) be equipped with a primary burner unless burning wood products;
(c) comply with 326 IAC 5-1 and 326 IAC 2;
(d) all other conditions in 326 IAC 4-2;
(e) be maintained properly as specified by the manufacturer and approved by the commissioner;
(f) be operated according to the manufacturer's recommendations and only burn waste approved by the commissioner;
(g) comply with other state and/or local rules or ordinances regarding installation and operation of incinerators;
(h) be operated so that emissions of hazardous material including, but not limited to, viable pathogenic bacteria, dangerous chemicals or gases, or noxious odors are prevented;
(i) not emit particulate matter in excess of three-tenths (0.3) pounds of particulate matter per one thousand (1,000) pounds of dry exhaust gas at standard conditions corrected to fifty percent (50%) excess air; and
(j) not create a nuisance or a fire hazard.

(2) Pursuant to 326 IAC 5-1-2 (Opacity Limitations) except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following:

(a) Opacity shall not exceed an average of thirty percent (30%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of 15 minutes (60 readings) in a 6-hour period as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuos opacity monitor in a six (6) hour period.

(3) Pursuant to 326 IAC 6-1-2 (Nonattainment Area particulate limitations), the Permittee shall not allow or permit discharges to the atmosphere of any gases which contain particulate matter in excess of 0.07 gram per dry standard cubic meter (g/dscm) (0.03 grain per dry standard cubic foot (dscf)).

This exemption is the first air approval issued to this source.

An application or notification shall be submitted in accordance with 326 IAC 2 to the Office of Air Management (OAM) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

Sincerely,

Paul Dubenetzky, Chief
Permits Branch
Office of Air Management

DH

cc: File - Lake County
Lake County Health Department
Air Compliance – Ramesh Tejuja
Northwest Regional Office
Permit Tracking - Janet Mobley
Technical Support and Modeling - Michele Boner
Compliance Data Section - Karen Nowak

Indiana Department of Environmental Management
Office of Air Management

Technical Support Document (TSD) for a New Source Construction and Exemption

Source Background and Description

Source Name: Lake County Animal Control
Source Location: 3011 W. 93, Crown Point, IN 46307
County: Lake
SIC Code: 3569
Operation Permit No.: 089-12431-00457
Permit Reviewer: D. Harper

The Office of Air Management (OAM) has reviewed an application from the Lake County Animal Control relating to the construction and operation of a small animal incinerator.

New Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units and pollution control devices:

One (1) small animal incinerator, with a maximum capacity of 115 lbs/hr of waste, using 1,600,000 Btu/hr of natural gas as supplemental fuel, and exhausting to stack 1.

Unpermitted Emission Units and Pollution Control Equipment

There are no unpermitted facilities operating at this source during this review process.

Existing Approvals

There are no existing approvals issued for this source during this review process.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (^{o}F)
1	incinerator	18	1	1300-1500	1300-1500

Enforcement Issue

There are no enforcement actions pending.

Recommendation

The staff recommends to the Commissioner that the construction and operation be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on June 28, 2000.

Emission Calculations

See Appendix A of this document for detailed emissions calculations. (2 pages)

Potential To Emit

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as Athe maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, the department, or the appropriate local air pollution control agency.@

Pollutant	Potential To Emit (tons/year)
PM	0.19
PM-10	0.19
SO_2	0.0
VOC	0.0
CO	0.6
NO_x	0.7

The PTE of the constituent pollutants is less than the level required for a permit. Therefore, this is an exempted source.

Actual Emissions

No previous emission data has been received from the source.

County Attainment Status

The source is located in Lake County.

Pollutant	Status
PM-10	moderate nonattainment
SO_2	primary nonattainment
NO_2	attainment
Ozone	severe nonattainment
CO	nonattainment
Lead	attainment

(a) Volatile organic compounds (VOC) and oxides of nitrogen (NOx) are precursors for the formation of ozone. Therefore, VOC and NOx emissions are considered when evaluating the rule applicability relating to the ozone standards. Lake County has been designated as severe nonattainment for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Emission Offset, 326 IAC 2-3.

(b) Lake County has been classified as nonattainment for CO, PM-10, and SO_2. However, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 because the source is not located in the nonattainment portions of Lake County.

Source Status

New Source PSD Definition (emissions after controls, based on 8,760 hours of operation per year at rated capacity and/ or as otherwise limited):

Pollutant	Emissions (ton/yr)
PM	0.19
PM-10	0.19
SO_2	0.0
VOC	0.0
CO	0.6
NO_x	0.7
Single HAP	0.0
Combination HAPs	0.0

This new source is not a major stationary source because the particulate matter (PM) is not emitted at a rate of 100 tons per year or greater. Therefore, pursuant to 326 IAC 2-3, the Emission Offset requirements do not apply.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This new source is not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

(a) each criteria pollutant is less than 100 tons per year,
(b) a single hazardous air pollutant (HAP) is less than 10 tons per year, and
(c) any combination of HAPs is less than 25 tons/year.

This is the first air approval issued to this source.

Federal Rule Applicability

(a) The small animal incinerator is not subject to the requirements of the New Source Performance Standard, 326 IAC 12, (40 CFR 60.30, Subpart Ce), due to the fact that only pathological waste will be burned.

(b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR art 63) applicable to this source.

State Rule Applicability - Entire Source

326 IAC 2-6 (Emission Reporting)

This source is located in Lake County and the potential to emit VOC and NO_X is less than ten (10) tons per year. The source is not one of the twenty-eight (28) listed sources and its potential to emit PM10 is less than one-hundred (100) tons per year including fugitive emissions, therefore, 326 IAC 2-6 does not apply.

326 IAC 4-2 (Incinerators)

Pursuant to 326 IAC 4-2 (Incinerators), this rule establishes standards for the use of incinerators

which emit regulated pollutants. All incinerators shall:

(a) consist of primary and secondary chambers or the equivalent;
(b) be equipped with a primary burner unless burning wood products;
(c) comply with 326 IAC 5-1 and 326 IAC 2;
(d) all other conditions in 326 IAC 4-2;
(e) be maintained properly as specified by the manufacturer and approved by the commissioner;
(f) be operated according to the manufacturer's recommendations and only burn waste approved by the commissioner;
(g) comply with other state and/or local rules or ordinances regarding installation and operation of incinerators;
(h) be operated so that emissions of hazardous material including, but not limited to, viable pathogenic bacteria, dangerous chemicals or gases, or noxious odors are prevented;
(i) not emit particulate matter in excess of three-tenths (0.3) pounds of particulate matter per one thousand (1,000) pounds of dry exhaust gas at standard conditions corrected to fifty percent (50%) excess air; and
(j) not create a nuisance or a fire hazard.

326 IAC 5-1 (Opacity Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of thirty percent (30%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

State Rule Applicability - Individual Facilities

326 IAC 6-1-2 (Nonattainment area particulate limitations)

The Permittee shall not allow or permit discharges to the atmosphere of any gases which contain particulate matter in excess of 0.07 gram per dry standard cubic meter (g/dscm) (0.03 grain per dry standard cubic foot (dscf)).

Air Toxic Emissions

Indiana presently requests applicants to provide information on emissions of the 188 hazardous air pollutants (HAPs) set out in the Clean Air Act Amendments of 1990. These pollutants are either carcinogenic or otherwise considered toxic and are commonly used by industries. They are listed as air toxics on the Office of Air Management (OAM) Construction Permit Application Form Y.

None of the listed air toxics will be emitted from this source.

Conclusion

The construction and operation of this small animal incinerator shall be subject to the conditions of the attached proposed New Source Construction and Exemption 089-12431-00457.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Small Industrial Boiler

Company Name: Lake County Animal Control
Address City IN Zip: 3011 W. 93, Crown Point, IN 46307
CP: 089-12431
Plt ID: 089-00457
Reviewer: D. Harper
Date: 7/10/00

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
1.6	14.0

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.0	0.1	0.0	0.7	0.0	0.6

*PM emission factor is filterable PM only. PM10 emission factor is condensable and filterable PM10 combined.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).

See page 2 for HAPs emissions calculations.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Small Industrial Boiler
HAPs Emissions

Company Name:
Address City IN Zip:
CP:
Plt ID:
Reviewer:
Date:

HAPs - Organics

	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	1.472E-05	8.410E-06	5.256E-04	1.261E-02	2.383E-05

HAPs - Metals

	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	3.504E-06	7.709E-06	9.811E-06	2.663E-06	1.472E-05

Methodology is the same as page 1.

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Appendix A: Emission Calculations
Small Animal Incinerator
Company Name: Lake County Animal Control
Source Address: 3011 W. 93, Crown Point, IN 46307
CP: 089-12431
Plt ID: 089-00457
Reviewer: D. Harper
Date: 07/10/00

Manufacturer's guaranteed particulate emission rate: 0.02 lbs/hr

Potential to emit (PTE) of particulate matter (PM):

PTE = (0.02 lbs PM/hr) x (8760 hr/yr) x (1 ton/2000 lbs)
= 0.09 tons PM/yr